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10/571,286	12/26/2006	Robert Weinmann	08388.0011	8133

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WASHINGTON, DC 20001-4413

EXAMINER
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MALEKZADEH, SEYED MASOUD

ART UNIT	PAPER NUMBER
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1791

MAIL DATE	DELIVERY MODE
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10/18/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/571,286

Applicant(s)

WEINMANN, ROBERT

Examiner

SEYED MASOUD  
MALEKZADEH

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-12 and 14 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☒ Claim(s) 1-15 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

DETAILED ACTION

*Election/Restrictions*

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-14 are drawn to an injection unit in an injection molding apparatus.

Group II, claim(s) 15 is drawn to a method for the adjustment of an injection unit in an injection molding apparatus.

The inventions listed as Groups I - II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: claim 1 which discloses an injection unit in an injection molding apparatus is either obvious or anticipated by (JP 10-202689) and claim 15 which is drawn to a method for the adjustment of an injection

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molding apparatus is either obvious or anticipated by Siegrist et al. (US 5,855,829)

Accordingly, in the instant application the special technical features linking the apparatus claims 1-14 and method claim 15, do not provide a contribution over one invention, and there is no single general inventive concept exists between two groups of invention. Therefore, restriction is appropriate.

"Where a group of inventions is claimed in one and the same international application, the requirement of unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art" (See MPEP, Chapter 1850).

"The determination whether a group of inventions is so linked as to form a single general inventive concept shall be made without regard to whether the inventions are claimed in separate claims or as alternatives within a single claim" (See MPEP, Chapter 1850).

During a telephone conversation with Mr. Ernest Chapman on September 19, 2007 a provisional election was made without

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traverse to prosecute the invention of Group I, claims 1-14. Affirmation of this election must be made by applicant in replying to this Office action. Claim 15 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior

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art, the evidence or admission may be used in a rejection under 35 U.S.C.103 (a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

*Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

*Information Disclosure Statement*

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper."

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Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

*Claim Rejections - 35 USC § 112*

Claim 7-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 discloses, "the individual drive has an electric motor especially a servo motor, as well as a spindle overdrive." In the this disclosure the word "especially" is indefinite and make the scope of the claim unclear, therefore, claim fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "close to zero" in claim 8 is a relative term, which renders the claim indefinite. The term "close to zero" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised the scope of the invention. Claim 8 discloses, "the support (5) in the region between the upper rotary pins (9) and the lower joint (11) and the running gear (40) is rigidly formed, with

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deformation under stress being close to zero". In this claim, phrase "close to zero" fails to particularly point out and distinctly claim the subject matter, and therefore, one of ordinary skill in the art would not be reasonably appraised of the scope of the invention.

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

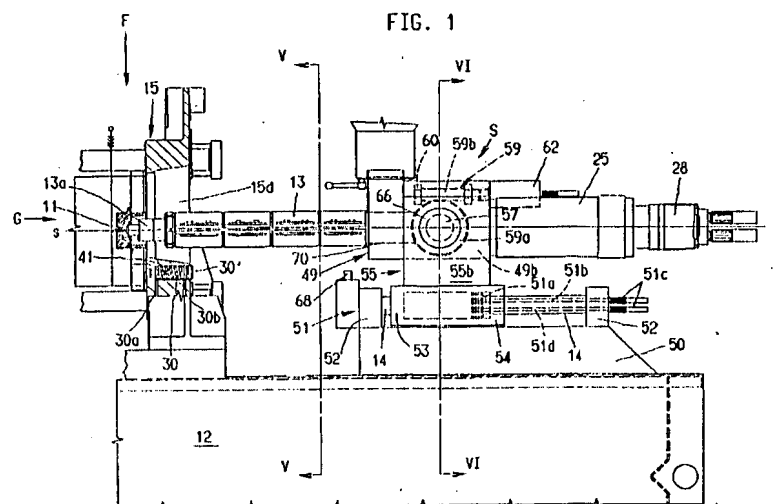
Claims 1-6 are rejected under 35 U.S.C. 102 (b) as being anticipated by Hehl (US 4,863,368)

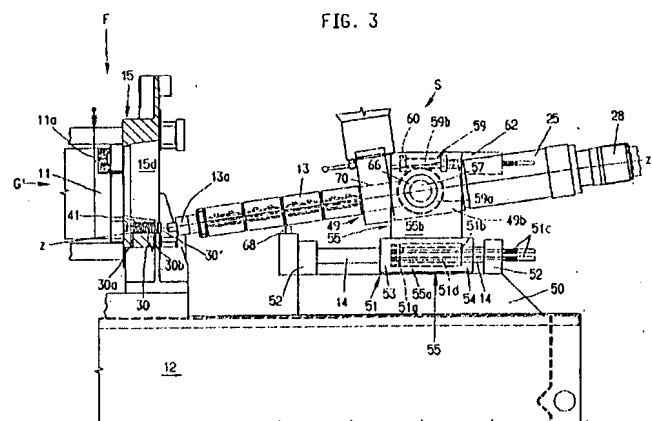
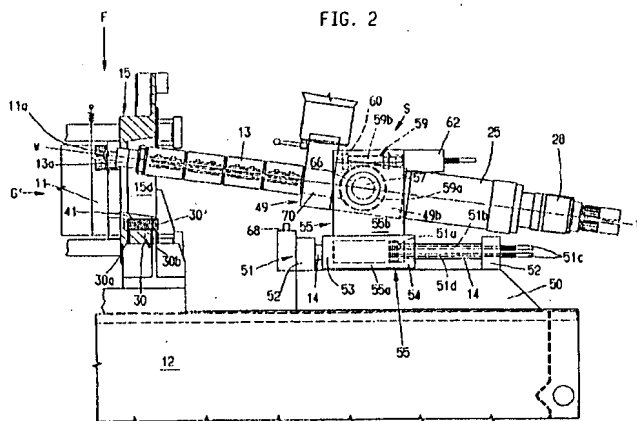
As to claim 1, Hehl ('368) discloses an injection unit which include a carrier block (49), which has the same structural functionality as a drive block, disposed in the rear section and is moveable on columns (14), which has the same structural limitation as runners, of the machine frame (50) in an injection molding machine (S) and also include a driving means (54) which is a hydraulic drive cylinder as a drive unit



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for axially displacing and pressing the plasticizing cylinder (13) to the injection mold, in which the injection unit (S) is supported in an articulated manner by a support (55a and 55b) which is moveable on columns (14) of the frame (50) of the injection molding machine and include a driving means (53 and 54) which is a hydraulic drive cylinder for pressing the plasticizing cylinder (13), with slight pivotability of the nozzle tip (13a), to the injection mold unit (F) while achieving a centric sealing connection, and the rear section (25 and 28) of the carrier block (49) is adjustably supported. (See figure 1 and lines 1-28, column 4)





Further, as to claim 2, Hehl ('368) discloses the support (55) is formed as a running gear (53, 54) with an undercarriage (50). (See figure 1 and lines 19-26, column 5)

As to claim 3, furthermore, Hehl ('368) teaches the support (55) has two lateral support cheeks (55a, 55b), which provide the plasticizing cylinder (13) with articulated support via rotary pins (57). (See figure 1 and lines 8-26, column 4)

Further, as to claim 4, Hehl ('368) teaches the support (55) features, which has a fish joint (55a and 55b) with a joint for a drive axis (s-s). (See figure 1 and lines 8-26, column 4)

Also, as to claim 5, Hehl ('368) discloses the active axis (14) of the fish joint (55b) connection is disposed at the center of the injection molding (S) and in parallel to the axis

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of the plasticizing cylinder (s-s). (See figure 1 and lines 1-4, column 4 and lines 65-68, column 4)

As to claim 6, further, Hehl ('368) teaches the active axis (14) is preferably disposed at approximately the frame level (50). (See figure 1)

The prior art, thus, meets all the claim limitations, and therefore, Hehl ('368) anticipates claims 1-6.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 7-8, 10-12, and 14 are rejected under 35 U.S.C.

103(a) as being unpatentable over Hehl ('368) in view of Hehl (US 5,622,737).

Hehl ('368) teaches all the structural limitations of an injection unit as discussed above in rejection of claims 1-6, 8, and 14. Further, Hehl ('368) discloses the support (55) is driven relative to the machine bed (50) in a direction parallel to the injection axis (s-s) by means of a hydraulic drive cylinder ('54) which is formed in a cylinder bore (53) in the support (55) and an axially stationary piston (51a) slidable there inside (See lines 8-13, column 5).

As to claim 8, furthermore, Hehl ('368) discloses the support (55) in the region between the upper rotary pins (57) and the joint (55a and 55b) and the running gear (53 and 54) is rigidly formed, with deformation under stress being close to zero. (See figure 1 and lines 19-28, column 4)

As to claim 14, further, Hehl ('368) teach the rotary pins (57) are at least approximately disposed in a shared horizontal plane with the axis of the plasticizing cylinder (13), in such a manner that during adjustment of the plasticizing cylinder tip (13a), a pivoting movement can be completed in both a horizontal

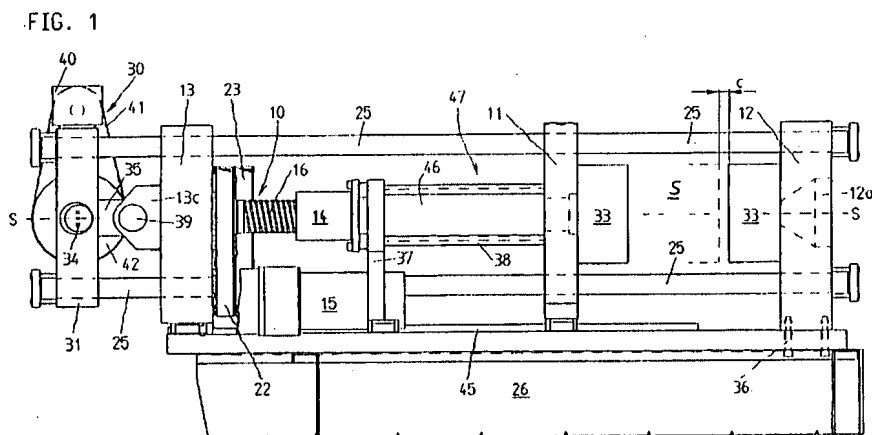
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and a vertical plane. (See figure 1, also, lines 19-28 and lines 53-59, column 4)

However, Hehl ('368) do not teach the drive mechanism is a servomotor with a spindle overdrive, as claimed in claim 7.

Also Hehl ('368) fail to teach the exact position of shoe guide, which control the movement of drive unit, as claimed in claims 10-12.

In the analogous art, Hehl ('737) teaches a mold-closing unit for use in an injection-molding machine for processing plastifiable materials including a first device (10) for transferring a movable mold carrier (11), and a second device (30) for generating the closing force. (See lines 1-20, column 5)



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Further, Hehl ('737) discloses the toggle lever mechanism is driven via a servomotor and the force is determined during the closing cycle. (See lines 19-26, column 3)

Also, Hehl ('737) discloses the first device (10) include a spindle system which serves for transferring the movable mold carrier. (See lines 1-5, column 4)

Furthermore, Hehl ('737) discloses the advantages of employing a servomotor and spindle system for toggle lever mechanism during the closing cycle in order to generate a reliable force for transmission of the mold parts. (See lines 41-45, column 3)

Therefore, it would have been obvious for one of ordinary skill in the art at the time of applicants invention to modify Hehl ('368) injection molding apparatus by providing a servomotor with a spindle overdrive as a mold closing drive system in order to generate a reliable force for transmission of system during mold closing cycle, as suggested by the Hehl ('737).

Also, it would have been obvious for one of ordinary skill in the art at the time of applicants' invention to use combined teachings of the Hehl ('368) and Hehl ('737) to merely adjust the position of the shoe guide when the apparatus perform

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similar function in order to get the maximum benefit of injection molding system.

*Allowable Subject Matter*

Claims 9 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art of record which are Hehl (US 4,863,368), Hehl (US 5,622,737), and Bielfeldt et al. (US 3,981,662) are described above. The references fail to disclose or suggest guide shoes are designed as spherical rotary spindles and the horizontal spacing with respect to the tension-stressed guide shoes being greater than the corresponding spacing of the pressure-stressed guide shoes to offset the K factor with regard to tension and pressure balancing, as claimed in claim 9, and the running gear (40) have four guide shoes and the guide shoe unit having two guide shoes, as disclosed in claim 13.

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Masoud Malekzadeh whose telephone number is 571-272-6215. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra N. Gupta can be reached on (571) 272-1316. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would



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(IN USA OR CANADA) or 571-272-1000.

SMM



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